

AMENDMENTS

In the Claims

Please amend claims 8-10, and 12-13 as set forth below.

Complete Listing of the Claims

Upon entry of the present amendments, the claims will stand as follows. The following listing of claims will replace all prior versions and listings of the claims in the present application:

1. (Withdrawn) A substantially pure Claspin polypeptide characterized as:
 - (a) specifically interacting with a chK1 protein;
 - (b) having SQ/TQ motifs
 - (c) having an isoelectric point of about 4.5; and
 - (d) having at least one nuclear localization signal.
2. (Withdrawn) The polypeptide of claim 1, wherein the polypeptide has an amino acid sequence as set forth in SEQ ID NO:2 or SEQ ID NO:4.
3. (Withdrawn) A substantially pure polypeptide having an amino acid sequence as set forth in SEQ ID NO:2 SEQ ID NO:4, or conservative variants thereof.
4. (Withdrawn) A substantially pure polypeptide having an amino acid sequence that is about 70% homologous to the polypeptide of claim 3.

5. (Currently Amended) An isolated polynucleotide encoding a polypeptide characterized as:

- (a) specifically interacting with a chK1 protein;
- (b) having SQ/TQ motifs,
- (c) having an isoelectric point of about 4.5;
- (d) ~~and~~ having at least one nuclear localization signal;
- (e) and having an amino acid sequence as set forth in SEQ ID NO: 2 or SEQ ID NO: 4.

6. (Withdrawn) A substantially pure polypeptide having the contiguous amino acid sequences
LAAVSDLNPNAPR (SEQ ID NO:6) or YLADGDLHSDGPGR (SEQ ID NO:7).

7. (Original) An isolated polynucleotide selected from the group consisting of:

- (a) a polynucleotide encoding a polypeptide having an amino acid sequence as set forth in SEQ ID NO:2 or SEQ ID NO:4;
- (b) a polynucleotide of (a), wherein T can be U;
- (c) a polynucleotide complementary to (a) or (b);
- (d) a polynucleotide having a nucleotide sequence as set forth in SEQ ID NO:1 or SEQ ID NO:3; and
- (e) degenerate variants of (a), (b), (c) or (d).

8. (Currently Amended) An isolated polynucleotide fragment having at least 15 continuous bases and that specifically hybridizes under highly stringent conditions to a polynucleotide selected from the group consisting of:

- (a) a polynucleotide encoding a polypeptide having an amino acid sequence as set forth in SEQ ID NO:2 or SEQ ID NO:4;
- (b) a polynucleotide of (a), wherein T can be U;
- (c) a polynucleotide complementary to (a) or (b);
- (d) a polynucleotide having a nucleotide sequence as set forth in SEQ ID NO:1 ~~or SEQ ID NO:3~~; and
- (e) degenerate variants of (a), (b), (c) or (d).

9. (Currently Amended) An isolated polynucleotide ~~having at least 15 continuous bases that hybridizes to a polynucleotide selected from the group consisting of~~ comprising:

- (a) a polynucleotide as set forth in nucleic acid residues 1-331, 799-903, 1232-1543, 2147-2486 or 2964-4756 of SEQ ID NO:3;
- (b) a polynucleotide of (a), wherein T can be U;
- (c) a polynucleotide complementary to (a) or (b);
- (d) a polynucleotide having a nucleotide sequence as set forth in SEQ ID NO:1 or SEQ ID NO:3; ~~and or~~
- (e) degenerate variants of (a), (b), (c) or (d).

10. (Currently Amended) An isolated polynucleotide, wherein said polynucleotide ~~is selected from~~ comprises:

- (a) a polynucleotide having a nucleic acid sequence set forth in SEQ ID NO:5; or
- (b) a polynucleotide complementary to (a); ~~and~~
- (c) ~~a fragment of (a) or (b).~~

11. (Original) An expression vector comprising a polynucleotide of claim 8.

12. (Currently Amended) The expression vector of claim 11, wherein the vector is ~~virus-derived~~
a viral vector.
13. (Currently Amended) The expression vector of claim ~~12~~ 11, wherein the vector is ~~plasmid-~~
~~derived~~ a plasmid vector.
14. (Original) A host cell comprising a vector of claim 11.
15. (Original) A method for producing a polypeptide comprising the steps of:
- (a) culturing a host cell of claim 14 under conditions suitable for the
expression of the polypeptide; and
 - (b) recovering the polypeptide from the host cell culture.
16. (Withdrawn) A method for identifying a compound that modulates cell cycle progression
comprising:
- (a) incubating a compound and a cell expressing a Claspin protein and a chk1
protein under conditions sufficient to permit the compound to interact with
the components;
 - (b) comparing cell cycle progression in the cell incubated with the compound
with the cell cycle progression of a cell not incubated with the compound,
wherein a difference in progression through the cell cycle is indicative of a
compound that modulates cell cycle progression.
17. (Withdrawn) The method of claim 16, wherein the Claspin protein is a human Claspin.
18. (Withdrawn) The method of claim 16, wherein the compound is selected from the species
consisting of a peptide, a peptidomimetic, a polypeptide, a pharmaceutical, a chemical
compound, a polynucleotide and an antibody.

19. (Withdrawn) A method for modulating cell cycle progression in a cell providing to the cell a reagent that affects the activity or expression of a Claspin polypeptide, thereby modulating cell cycle progression.
20. (Withdrawn) The method of claim 19, wherein modulation of cell cycle progression is inhibition or a reduction in progression.
21. (Withdrawn) The method of claim 19, wherein the compound is selected from the species consisting of a peptide, a peptidomimetic, a polypeptide, a pharmaceutical, a chemical compound, a polynucleotide, and an antibody.
22. (Withdrawn) A method for modulating cell cycle progression in a cell, said method comprising providing to the cell a reagent that modulates the activity or expression of a chk1 polypeptide, thereby modulating the cell cycle progression,
wherein the chk1 polypeptide is human Chk1 and the reagent is a human Claspin polypeptide.